

TOWN OF DAVIE

TOWN COUNCIL AGENDA REPORT

TO: Mayor and Councilmembers

FROM/PHONE: Mark Kutney, AICP, Development Services Director / (954)797-1011
Prepared by Michael S. Orfanedes – Urban Forester and
Bruce Bernard – Director of Public Works

SUBJECT: Resolution – Everglades Action Plan

AFFECTED DISTRICT: ALL

TITLE OF AGENDA ITEM:

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, ACKNOWLEDGING THE TOWN'S PARTICIPATION IN THE BROWARD EVERGLADES PROTECTION INITIATIVE AND AUTHORIZING THE IMPLEMENTATION OF THE TOWN'S EVERGLADES PROTECTION ACTION PLAN AS DEVELOPED THROUGH PARTICIPATION IN THIS COLLABORATIVE EFFORT AND PROVIDING FOR AN EFFECTIVE DATE.

REPORT IN BRIEF: Over the past nine months, Town of Davie Development Services and Public Works staff participated in a Broward County and South Florida Water Management District-led initiative to develop municipal action plans for Everglades protection. These efforts were undertaken out of necessity to bring the watershed into compliance with new guidelines established to facilitate restoration of the Everglades ecosystem. Known as the Broward Everglades Work Group, this consortium included the following municipalities in the C-11 canal basin: Davie, Pembroke Pines, Southwest Ranches, Sunrise and Weston. Through a series of joint meetings as well as individual efforts, each community developed and presented its own action plan aimed at addressing the mutual problems of storm water management and discharge of pollutants into the Everglades ecosystem.

Davie's action plan was developed through a joint effort of the Development Service and Public Works Departments. It includes a combination of improvements to stormwater management infrastructure and adoption of landscape maintenance best management practices (BMP's), particularly those regarding the application of fertilizers. The plan also emphasizes public outreach and voluntary participation of property owners and land managers regarding landscape, nursery and manure management BMP's. A draft of the Davie action plan was presented to Town Council via a workshop held late last year. It has also been presented to the Open Space, Agriculture and Water & Utility Advisory Committees for their review and comment. Council is now being asked to appropriate the funds necessary to implement the outreach component of the plan.

PREVIOUS ACTIONS: None

CONCURRENCES: None

FISCAL IMPACT: Yes
Has request been budgeted? No

If yes, expected cost: \$25,000/year for part-time staff member, educational resources, fleet, etc. for a 2-year program to be reevaluated for continuance at end of contract period.

Account Name:

What account will funds be appropriated from:

RECOMMENDATION: Staff finds the subject item complete and suitable for transmittal to Town Council for further consideration.

Attachment(s): Resolution

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, ACKNOWLEDGING THE TOWN'S PARTICIPATION IN THE BROWARD EVERGLADES PROTECTION INITIATIVE AND AUTHORIZING THE IMPLEMENTATION OF THE TOWN'S EVERGLADES PROTECTION ACTION PLAN AS DEVELOPED THROUGH PARTICIPATION IN THIS COLLABORATIVE EFFORT AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the Town Council seeks to collaborate with the South Florida Water Management District, Broward County DEP and sister municipalities in the C-11 canal basin to enact action plans to facilitate Everglades restoration; and

WHEREAS, the Town Council has acknowledged and encouraged efforts to improve the management of storm water through ongoing and planned efforts to upgrade infrastructure; and

WHEREAS, the Town Council desires to adopt landscape best management practices on Town-owned property; and

WHEREAS the Town Council seeks to encourage the adoption of landscape, nursery and manure best management practices on private property,

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA.

SECTION 1. The Town Council of the Town of Davie does hereby authorize the Town Administrator and/or appropriate staff to continue to implement planned improvements to storm water management infrastructure and to adopt landscape best management practices (BMP's) on all Town-owned and Town-managed properties including parks, trails, open spaces and rights of way;

SECTION 2. The Town Council of the Town of Davie authorizes the Town Administrator and/or appropriate staff to conduct and/or partner with other organizations to conduct needed outreach to encourage the adoption of landscape, nursery and manure management BMP's;

SECTION 3. This resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED THIS _____ DAY OF _____, 2005.

MAYOR/COUNCIL MEMBER

ATTEST:

TOWN CLERK

APPROVED THIS _____ DAY OF _____, 2005.

Town of Davie Everglades Pollution Prevention Strategies

For the past year, the Town of Davie has been an active partner in the Broward Everglades Working Group, a consortium of municipalities, regulatory agencies and academic institutions working to protect the Everglades ecosystem from the deleterious effects of impacts of pollutants originating from C-11 Canal basin farms, towns and cities.

Phosphorus, a common element found in native rock, soil, and most fertilizers including manure, is of particular concern. Water quality standards have been established for phosphorus in surface waters and ground waters. Unacceptably high levels of phosphorus in the Everglades can have serious effects on the ecosystem including rampant growth of undesirable vegetation such as cattails. The Working Group has identified three primary sources of phosphorus that need to be monitored and possibly regulated:

1. Fertilizers from nurseries and landscaped areas; and
2. Nutrients from horse stalls, barns and livestock waste; and
3. Release of phosphorus from native rock/soil during the course of land development and from municipal stormwater runoff/sedimentation;

In collaboration with Town Council and several Town advisory committees (Agriculture, Open Space and Water & Utilities) staff from the Development Services and Public Works departments have identified a number of strategies that the Town and its citizens could implement to reduce point and non-point source phosphorus pollution. At this point in time, these strategies would be encouraged to achieve voluntary reductions as a means of avoiding regulation. The Town's belief is that if voluntary reduction of phosphorus pollution can be sufficiently accomplished, it will be far less expensive and less onerous than regulation. Non-point pollution sources are particularly difficult to identify and regulate. Experience in South Florida has shown that when land managers come together voluntarily to reduce phosphorus pollution, as in the Everglades Agricultural Area, the goal can be accomplished without regulation.

These strategies will be presented in two parts—landscape best management practices (BMP'S) that need to be implemented or have only partially been implemented—and on-going capital improvement projects addressing management of storm water and drainage.

Landscape Best Management Practices (BMP's)

The following are some very specific ideas that have been brought forward and are currently under consideration as to how Davie can move forward on this issue:

1. Partner with the collaborating agencies (e.g. Broward Co. Department of Planning and Environmental Protection, Broward Co. Extension Education Division, Central Broward Water Control District, South Florida Water Management District, etc.) to conduct educational outreach to residents, Homeowners Associations, property managers, landscape contractors and nurseries regarding implementation of landscape best management practices (BMP's) as described in the publication *Florida Green*

Industries Best Management Practices for Protection of Water Resources in Florida; this booklet contains practical, research-based information that these audiences can use to achieve compliance; examples include:

- use of installation of rain sensors and shut-off valves;
- smart irrigation systems;
- irrigation zoning;
- turf “conditioning”;
- use of catch basins and water recycling;
- drip irrigation;
- “Xeriscaping”;
- “Right Tree Right Place”;
- Florida Yards & Neighborhoods/Naturescape certification;
- soil and foliar nutrient testing;
- timely fertilization;
- fertilizer spreader/applicator calibration;
- increased use of slow-release fertilizer products;
- “Ring of Responsibility”;
- littoral shelf plant communities;
- canal bank stabilization in accordance with Central Broward Drainage District guidelines;

Outreach will be conducted through the following possible venues:

- “Town of Davie Update”, Davie’s official quarterly publication mailed free of charge to all households townwide;
 - Town of Davie’s website with links to our advisory committee webpages and Broward County Naturescape;
 - Town of Davie demonstration garden;
 - Town Council presentations;
 - presentations to Town-based committees such as Open Space, Agriculture, and Water & Utilities;
 - Homeowners’ association meetings, periodicals and websites;
 - programs for landscape contractors;
2. Work with retail and wholesale fertilizer dealers (LESCO, Home Depot, Lowe’s, garden centers, etc.) to promote the sale of environmentally responsible fertilizer materials--case in point, on a recent visit to a major national retailer in Davie, many of the products for sale were either quick release fertilizer formulations or had products for sale with high phosphorus content; no matter how much outreach is done, if residents, contractors and property managers cannot readily find products which meet the special needs of the local environment, then it will be very difficult to make any real progress on this issue;
 3. Conduct outreach classes for Town of Davie Public Works and Parks & Recreation Department employees who apply fertilizers and pesticides to public areas within the C-11 basin; teach proper handling, application and storage methods to minimize off-site pollution and possible risks due personal exposure to these materials; have a core group of employees from each of the above-mentioned departments obtain “Know the Flow, Slow the Flow certification”; encourage the Broward Co. Parks and Recreation

Division to do the same for its employees who perform similar activities on county land within the Town;

4. Implement landscape best management practices on all Town-owned properties including the extensive system of parks, open space and trails; the Town's leadership on this issue and implementation of BMP's will serve as a positive example for residents, property owners and developers;
5. Conduct outreach to Davie's equestrian community regarding best management practices for handling, storage and disposal of animal wastes and barn bedding; distribute the new equine BMP guide entitled "Good Horse Sense, Protecting Water Resources".
6. Provide the newly created Broward Mobile Irrigation Lab with one or more sites within the Town of Davie to conduct research/demonstrations of products/practices to improve the efficiency of irrigation systems on both public and private property;
7. Create a landscape best management practices brochure to be a companion to the recently created Save Our Swales publication;
8. Provide staff support for educational outreach to Broward County Water Matters Day held annually at Tree Tops Park and Davie Waterways Clean Up Day;
9. Revise the Town of Davie Land Development Code- Landscape section to include Naturescape principles and standards; require landscape plans to specify Everglades-friendly slow release fertilizers;
10. Revise and amend policies contained within the Town's Comprehensive Plan to further support Everglades protection and restoration efforts such as those mentioned above; planning for such action to be reported on beginning with the Town's Evaluation and Appraisal Report (EAR) which is currently under revision;

Capital Improvement Projects – Stormwater Management and Drainage

The Town of Davie has had an active role over the last ten years in providing pollution reduction strategies in regard to stormwater runoff. The Town, in conjunction with the Central Broward Water Control District, has undertaken numerous stormwater drainage projects to prevent direct discharge into secondary canals that contribute into the C-11 and C-12 Canals. Through the installation of strategically located catch basins, exfiltration trenches, improved swales sections and overflow structures we have provided storage for the first flush of stormwater and lowered the solids and phosphorus loading in the C-11 basin.

The Town of Davie has been involved, via the inter-local drainage consortium report of December 2000, with a major drainage improvement project over the last three years in areas targeted by this consortium study. These improvements within twelve locations within the Town were designed as a priority for stormwater projects. Within this project many stormwater "Best Management Practices" are being in acted to increase water quality and lower solids and phosphorus loading into water that is back pumped into the Everglades. Some of the best practices include on-site retention, exfiltration trenches installation, swale section regarding, outfall structure with weirs installation and pollution barriers. The expenditure for this project will be approx. \$3.5 million dollars.

The Town will also be working with Central Broward Water Control District to begin retrofitting existing canal outfalls with overflow structures to maintain sediment and first flush retention within the stormwater system.

Subdivisions within the Town that have seen improvements over the last decade include:

- Playland Village, Oak Hill, Sequoia Estates, Royal Palm Estates, Orange Park, Sunnyland Farms, Green Acres, Sunshine Village, New River Groves, Driftwood Estates

Subdivisions scheduled for drainage improvements over the next three years:

- Silver Lakes, Arrowhead, Oak Hill, Potter Park, Orange Park

The Town Council of Davie has also recognized the need for positive steps to insure water quality by establishing within the next fiscal budget a stormwater maintenance division for the Public Works Department. This division will concentrate entirely on stormwater systems preventive maintenance and street sweeping. The ability to maintain the systems in place on an on-going basis will help to minimize run-off organics from entering the drainage system and thus lowering the loading on the existing canal systems.

Prepared by: Dr. Michael Orfanedes, Urban Forester – Planning and Zoning Division, Bruce Bernard, Director of Public Works and Jack Martin, Asst. Director of Public Works

Revised May 13, 2005

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